M E M O R A N D U M

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DATE: March 22, 2012

SUBJECT: Operational Position Statement for the Week of Mar 20 – Mar 26, 2012

The U.S. Army Corps of Engineers (USACE) is responsible for managing Lake Okeechobee water levels and makes operational decisions about whether to retain water or release water based on their regulation schedule release guidance. The USACE makes this decision taking into account the best available science and data provided by its staff and a variety of partners, which includes the South Florida Water Management District (SFWMD).

The SFWMD team has discussed the system wide environmental conditions, the water supply conditions, and has evaluated the overall status of the water management system. Detailed reports are available at the SFWMD's Operational Planning internet page.

Recommendation to the USACE

The Adaptive Protocol guidance suggests releases at S-79 up to 450 cfs, supplemented as needed from Lake Okeechobee IF the Lake stage is within the Baseflow Subband of the Lake O Regulation Schedule. The past fourteen weeks of 450 cfs (or more) average release have helped to limit high salinities at Val-I75, however the 30-day moving average salinity remains above 5 psu.

Because the Lake stage is falling and close to the bottom of the Baseflow subband of the regulation schedule, the SFWMD is deferring its recommendation until next Tuesday. If the Lake stage is still within the Baseflow subband on Tuesday (March 27th), the SFWMD will likely recommend that the USACE initiate another 450 cfs average release at S-79 for a fourth consecutive 10-day period starting at 07:00 Wednesday, Mar 28th and ending at 07:00 Tuesday, April 7th. The tentatively recommended daily S-79 release schedule is provided below.

The SFWMD also recommends that the USACE continue their standard operation to allow runoff from the C-44 basin (S-308 to S-80) to backflow to Lake Okeechobee via S-308 rather than discharge to tide via S-80.

Tentative release pattern dependent on Lake O stage on Tuesday, March 27th.

Day #	Day	Start Date & Time	S-79 cfs
1	Wed	3/28/2012 07:00	1100
2	Sun	3/29/2012 07:00	1600
3	Mon	3/30/2012 07:00	850
4	Tue	3/31/2012 07:00	500
5	Wed	4/1/2012 07:00	350
6	Thu	4/2/2012 07:00	100
7	Fri	4/3/2012 07:00	0
8	Sat	4/4/2012 07:00	0
9	Sun	4/5/2012 07:00	0
10	Mon	4/6/2012 07:00	0
		10-day Sum	4500
		10-day Mean	450

Weather and Climate

Rainfall during the past week totaled 0.23 inches district wide (through 7am Mar 20th). For the past 30 days rainfall has been 67% of average. The SFWMD precipitation outlook for the next ten days (Mar 14 - Mar 24) is below-average with moderate confidence. The 15-Mar CPC precipitation outlook for April indicates increased chances of below-normal rainfall. For the remainder of the 2011-2012 dry season and for the beginning of the wet season, the CPC outlook shows equal chances for below-normal, normal, and above-normal rainfall.

Upper and Lower Kissimmee Basins

Stages in the most of the Kissimmee Chain of Lakes are at or within 0.4 feet of their respective flood regulation schedules or the temporary snail kite recession lines. The temporary snail kite recession lines have been implemented for Lakes Toho, East Toho, Kissimmee, Cypress and Hatchineha. Lake Kissimmee stage continues to recede due to the dry weather and S-65 environmental releases, which are made to the Kissimmee River per the Interim Operational Schedule and Release Rules for Lake Kissimmmee-Hatchineha-Cypress. Discharge at S-65 to the Kissimmee River averaged about 460 cfs for the week ending March 18th, down from last week's 670 cfs. Discharge from the Kissimmee River to Lake Okeechobee via S-65E averaged about 500 cfs for the week ending March 18th, down from last week's 570 cfs.

Lake Okeechobee Stage and Regulation Schedule

The March 19th, 2012 Lake Okeechobee stage (reported by the USACE on March 20th) was 12.74 feet NGVD, 0.10 feet lower compared with 7-days ago. The March 19th stage was about 0.4 feet lower than it was a month ago and about 1.0 feet higher than a year ago. The current stage remains about 1.7 feet lower than the historical average for this date.

This week the Tributary Hydrologic Conditions is again in the "dry" classification (LORS-2008 classifications). The 14-day average Lake Okeechobee Net Inflow was -1034 cfs (dry) through March 18th. The March 17th Palmer Index was -3.33 (very dry). The March 19th Lake stage was 0.16 feet above the bottom of the Baseflow Sub-band and 0.99 feet above the Water Shortage Management Band.

The LORS-2008 release guidance suggests no releases to the WCAs due to the dry tributary hydrologic conditions. LORS-2008 release guidance also suggests up to 450 cfs at S-79, and up to 200 cfs at S-80. Those releases are baseflow releases designed to regulate Lake stages. The SFWMD's Adaptive Protocol provides the necessary guidance for the appropriate release amount. Refer to the recommendations section below.

Water Supply Risk Indicators

The risk status for Lake Okeechobee Area is similar to last week. Three of the six LOSA water supply risk indicators are in the "medium risk" category; whereas the Palmer Index and the projected Lake stage remain within the "high risk" category. The CPC precipitation outlook for the upcoming 3 months moved to the "low risk" category. The risk status for all WCAs and Lower East Coast service areas remains within the "low risk" category.

The South Florida Water Management District Governing Board voted on November 10 to rescind a series of water shortage orders that restricted landscape irrigation and placed mandatory reductions of agricultural and other large water uses. The action was taken in response to improved water resource conditions throughout the District's 16-county region following the fourth-wettest October on record. With long-term forecasts still calling for below-average rainfall during the 2011-2012 dry season, the Governing Board also declared a water shortage warning to encourage continued vigilance and voluntary water conservation.

Groundwater Levels

Groundwater levels decreased over most of the District this week, except in areas of the Lower East Coast (LEC) that received greater rainfall. About half of the United States Geological Survey (USGS) real-time wells in the Kissimmee Basin within the District boundaries are at their lowest 10th to 30th percentile levels for this time of year; the rest remain at median levels. Stages in the Upper East Coast (UEC) canals C-23, C-24, and C-25 are at 22.56, 20.88, and 22.01 ft NGVD, respectively, well above the 14 ft NGVD agricultural cutoff level. Groundwater levels in the UEC are mostly at median levels for this time of year. Most Biscayne aquifer water elevations in the LEC are at median or higher levels. Groundwater levels increased in a few wells in coastal Broward and northern Miami-Dade counties. Some LEC wells in South Dade, Homestead, and Hallandale have dropped below 2 ft NGVD and will be monitored closely given the potential for saltwater intrusion.

For more detailed information, refer to the Mar 20, 2012 Water Supply Report, which is posted at www.sfwmd.gov.

Everglades WCAs

During the past week WCA water levels at the gages used for the regulation schedules stayed relatively steady or slightly decreased. Rainfall amounts ranged from 0.08 inches in WCA-1 to 0.84 inches in WCA-2B. WCA-1 marsh stage is about 0.2 feet below its lower (Zone B) regulation schedule. WCA-2A marsh gage (2-17) is about 0.5 feet above schedule, and the canal gage is near schedule. WCA-3A stage continues to track the bottom of the regulation schedule's Zone E1. SFWMD scientists recommend retaining water in both WCA-2A and WCA-3A while following the Rainfall Plan for deliveries to ENP and allowing evapotranspiration to drive recession rates.

Water releases from WCA-3A to ENP per the Shark Slough Rainfall Plan continue. The Rainfall Formula amount this week is 75 cfs; target flow is also 75 cfs since the average WCA-3A stage is below the transition zones of the regulation schedule, thus requiring no regulatory/supplemental flow component. Target flow is down but similar to last week's 77 cfs. S-333 is open to deliver 55% of the target flow to Northeast Shark River Slough (stage at G-3273 is 5.59 ft, is below the trigger stage of 6.8 feet, NGVD). S-12D is open to pass 45% of the target flow. S-12A, S-12B and S-12C are closed per the federal operating rules (Interim Operating Plan {IOP}).

St. Lucie Estuary

The estuary received no inflow via S-80 from Lake Okeechobee during the past week. Little to no inflow from C-23 and C-24 occurred. 7-day average salinity conditions in the SLE have decreased during the past week, and the 30-day moving average remains within the preferred range at the US-1 Bridge. Conditions are classified as good for oysters for this time of year. It is recommended that the estuary should not receive inflows from the Lake or from C-44 basin runoff. To conserve water supplies it is recommended that the USACE continue their current operation to direct C-44 basin runoff westward to Lake Okeechobee, and not eastward through S-80 to tide.

Caloosahatchee Estuary

Releases have been made from the Lake via S-77 and to the Caloosahatchee Estuary via S-79 during the past fourteen weeks (since December 16, 2011) consistent with the Lake Okeechobee Adaptive Protocol (AP) recommendations. The 30-day moving average surface salinity is estimated to be about 6.5 psu at Val I75 and 13.7 psu at Ft. Myers. Salinity conditions in the estuary are considered to be poor for tape grass and fair for oysters considering their salinity preference and location in the estuary. Releases at S-79 averaged about 96 cfs during the past week (was 707 cfs last week). The average flow rate over each 10-day pulse is closer to the 450 cfs target. Flow releases of 450 cfs and greater have not been sufficient to lower salinity at Val I75 below 5 psu. The March 20th salinity forecast (assuming baseflow releases

stop) indicates the 30-day moving average salinity at Val I-75 will increase during the next two weeks, and will continue to exceed 5 psu.

The following describes the release guidance per the Final Adaptive Protocols for Lake Okeechobee Operations (September 16, 2010). Each Tuesday the Coastal Ecosystem Section reviews the salinity conditions in the Caloosahatchee estuary and forecasts the predicted salinity for 14 days into the future at Val I75. The criterion for when the estuary needs water depends on the two week predicted salinity at Val I75 being at least 5 psu. Therefore according to the salinity criterion, the estuary needs freshwater inflow at S-79, supplemented from Lake Okeechobee as necessary.

The upper branch of the Adaptive Protocol release guidance flowchart applies since the stage is within the Baseflow Subband of the regulation schedule. Currently there is less than a 50% chance that the Lake stage will fall below elevation 11.0 ft, NGVD, before the end of the dry season. Correspondingly, the release guidance suggests releases up to 450 cfs at S-79, supplemented as needed with Lake Okeechobee releases at S-77.